



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,599	08/27/2001	Cornelis Petrus Gerardus Schrauwen	00771.00019	6939

22907 7590 09/08/2003

BANNER & WITCOFF
1001 G STREET N W
SUITE 1100
WASHINGTON, DC 20001

EXAMINER

MOORE, KARLA A

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 09/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,599

Applicant(s)

SCHRAUWEN ET AL.

Examiner

Karla Moore

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20 and 24-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 20 and 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,701,251 to Beardow.
4. Beardow discloses an apparatus for applying at least one coating to objects by vapor deposition (PVD) under vacuum substantially as claimed. The apparatus comprising: a PVD device (Figure 5, 303) for coating an object (discs, not numbered) under vacuum (column 8, rows 17-19); a transport device (column 8, rows 29-32) which extends through the PVD device, wherein the transport device is adapted to transport objects arranged on carriers (17), and the PVD device is adapted for semi-continuous treatment of the objects arranged on carriers; a preprocessing device (312) for performing a preprocessing on the object; and a postprocessing device (313) for postprocessing the object, wherein the transport device extends through the PVD device, preprocessing device and postprocessing device; wherein the carriers are elongate and object holders (Figure 7, 410; column 10. rows 52-55), the object holders being rotatable (column 7, rows 36-39) and the transport device being adapted to move the carriers substantially in the longitudinal direction (see Figures 5 and 6) and to rotate the object holders in the PVD device (column 7, rows 36-39); wherein the PVD device is connected to the ambient environment by a single lock (301), the transport device extends through the lock and the lock is adapted

Art Unit: 1763

to feed a carrier simultaneously into and out of the PVD device; and wherein the transport device has a closed configuration and extends in two directions through the PVD device (see Figure 5).

5. With respect to claim 31, a loading/unloading station (column 9, rows 24-27) is placed between the postprocessing device and the preprocessing device for unloading processed objects and loading objects for processing.

6. With respect to claim 32, an object holder (410) is present on the carrier, the object holder being interchangeable with an object holder on another carrier. Examiner notes that while not explicitly disclosed that the object holders/spindles are interchangeable, they are constructed identically and would therefore be interchangeable.

5. With respect to claim 33, the object holder is placed on a vertically extending shaft (Figure 7; column 10, rows 40-44) mounted rotatably in the carrier (column 9, rows 46-67).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beardow as applied to claims 20 and 31-33 above, and in view of U.S. Patent No. 3,584,847 to Hammond et al.

Art Unit: 1763

8. Beardow discloses the invention substantially as claimed and as described above.

9. However, the prior art fails to teach a buffer for the carrier arranged between the preprocessing device and the PVD device or the PVD device and the postprocessing device.

10. Hammond et al. teach the use of a buffer chamber on either side of a sputtering chamber to protect the atmosphere inside the chamber from contamination (column 3, rows 15-30).

11. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a buffer on either side of the PVD chamber in Beardow in order to protect the atmosphere inside the chamber from contamination as taught by Hammond et al.

12. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beardow as applied to claims 20 and 31-33 above, and in view of U.S. Patent No. 4,310,614 to Connell et al.

13. Beardow discloses the invention substantially as claimed and as described above.

14. However, Beardow fails to disclose the preprocessing device comprising a blower for blowing dust from objects.

15. Connell et al. teach the use of an ion air gun prior to the entrance of a substrate into a vapor deposition apparatus to remove any accumulated dust particles on the substrate surface (column 12, rows 14-21).

16. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a blower in the pre-processing device Beardow in order to remove dust particles from the surface of an object to be treated as taught by Connell et al.

17. Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beardow as applied to claims 20 and 31-33 above, and in view of U.S. Patent No. 4,853,283 to Skolnick.

18. Beardow discloses the invention substantially as claimed and as described above.

19. With respect to the limitations of claim 29, Beardow further discloses the preprocessing device as capable of etching (column 12, rows 9-11), which could be used as a surface process prior to the

Art Unit: 1763

application of a coating. Beardow also teaches that additional processing modules may be incorporated as required (column 8, rows 21-24).

20. However, the Beardow fails to teach a processing device (pre-or post-) comprising an application device for applying a lacquer and irradiating the lacquer with UV radiation.

21. Skolnick teaches the applying a layer of lacquer and curing the lacquer using UV radiation for the purpose of forming a protective layer both before and after applying a depositing a PVD film (3, rows 27-45, column 4, rows 43-51 and column 5, rows 8-25).

22. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a pre- and/or a post-processing chamber capable of applying and curing a lacquer coating in Beardow in order to form protective layers that "sandwich" a PVD film as taught by Skolnick.

Allowable Subject Matter

23. Claims 26 and 34-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

24. The following is a statement of reasons for the indication of allowable subject matter: With respect to claim 26, the prior art fails teach or fairly suggest **buffers** arranged between the PVD device and the postprocessing device **adapted to move carriers in transverse direction**. With respect to claims 34-38 the prior art further fails to teach fairly suggest **a toothed wheel arranged on the shaft for driving the shaft for driving the shaft in rotation**. Additionally, no other reference provided motivation for adding either of the features to the prior art cited above.

Response to Arguments

25. Applicant's arguments, see Paper No. 9, filed 06/23/06, with respect to the rejection(s) of claim(s) and use of the Baumecker reference have been fully considered and are persuasive. Therefore, the

Art Unit: 1763

rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Beardow.

26. Applicant's arguments with respect to the use of the Robinson reference have been considered but are moot in view of the new ground(s) of rejection.

27. Applicant's arguments with respect to the use of the Hammond reference have been considered but are moot in view of the new ground(s) of rejection.

28. Applicant's arguments filed with respect to Connell have been fully considered but they are not persuasive. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. Applicant has stated that an ion air gun is not a blower. However, the specific passage cited above in the office action states "the substrate surface may be blown off with an ion air gun". Examiner believes that the prior arts more specific interpretation of a blower reads on Applicants claim.

29. Applicant's arguments with respect to the use of the Skolnick reference have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1763

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 703.305.3142. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 703.308.1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

km

*Primary Examiner
AU 1763
D. Hassenzedel*